

		50			
rhimi	SIDGGIRAAT	SQEINELTYY	TTLSANSYCR	TVIPGA...T	WDC..IHCDA
rhidl	SDGGKVVAAT	TAQIQEFTKY	AGIAATAYCR	SVVPGN...K	WDC..VQCQK
SP400	-----	EVS	QDLFNQFNLF	AQYSAAYCG	KNNDAPAGTN
Pcl	-----	DVS	TSELDQFEFW	VQYAAASYYE	ADYTAQVGDK
FoLnp11	-----	AVGVT	TTDFSNFKFY	IQHGAAAYC.	.NSEAAAGSK
		100			
rhimi	TE..DLKIIK	TWS.TLIYDT	NAMVARGDSE	KTIYIVFRGS	SSIRNWIADL
rhidl	WV.PDGKIIIT	TFT.SLLSDT	NGYVLRSDKQ	KTIYLVFRGT	NSFRSAITDI
SP400	VEKADATFLY	SFEDSGVGDV	TGFLALDNTN	KLIVLSFRGS	RSIENWIGNL
Pcl	VEATGATVSY	DFSDSTITDT	AGYIAVDHTN	SAVVLAFRGS	YSVRNWWADA
FoLnp11	VQGNGATIVT	SFVG.SKTGI	GGYVATDSAR	KEIVVSFRGS	INIRNWLTNL
		150			
rhimi	TFVPVSY.PP	VSGTKVHKGF	LDSYGEVQNE	LVATVLDQFK	QYPSYKVAVT
rhidl	VFNFSDY.KP	VKGAKVHAGF	LSSYEQVND	YFPVVQEQLT	AHPTYKVIVT
SP400	NFDLKEINDI	CSGCRGHDGF	TSSWRSVADT	LRQKVEDAVR	EHPDYRVVFT
Pcl	TFVHTNP.GL	CDGCLAEELGF	WSSWKLVRDD	IIKELKEVVA	QNPNEYLVVV
FoLnp11	DFGQEDC.SL	VSGCGVHSGF	QRAWNEISSQ	ATAAVASARK	ANPSFNVIST
		200			
rhimi	GHSLGGATAL	LCALDLYQRE	EGLSSSNLFL	YTQQQPRVGD	PAFANYVVST
rhidl	GHSLGGAQAL	LAGMDLYQRE	PRLSPKNLSI	FTVGGPRVGN	PTFAYYVEST
SP400	GHSLGGALAT	VAGADLRGN.	.GY...DIDV	FSYGAPRVGN	RAFAEFLTVQ
Pcl	GHSLGAAVAT	LAATDLRGK.	.GYP..SAKL	YAYASPRVGN	AALAKYITAQ
FoLnp11	GHSLGAAVAV	LAAAANLRVG.	.GT...PVDI	TYGSPRVGN	AQLSAFVSNQ
		250			
rhimi	G.IPYRRTVN	ERDIVPHLPP	AAFGFLHAGE	EYWITD.NSPETVQ
rhidl	G.IPFQRTVH	KRDIVPHVPP	QSFGLHPGV	ESWIKS.GT.SNVQ
SP400	TGGTLYRITH	TNDIVPRLPP	REFGYSHSSP	EYWIKS.GTL	V.PVTRNDIV
Pcl	G..NNFRFTH	TNDPVPKLPL	LSMGYVHVSP	EYWITS.PNN	A.TVSTSDIK
FoLnp11	A.GGEYRVTH	ADDPVPRLLPP	LIFGYRHTTP	EFWLSGGGGD	KVDYTISDVK
		300			
rhimi	VCTSDELTS	CSNSIVPFT.	.SVLDHLSYF	GINTGLCT	-----
rhidl	ICTSEIETKD	CSNSIVPFT.	.SILDHLSYF	DINEGSCL	-----
SP400	KIEGID.ATG	GNNQP.NIP.	.DIPAHLWYF	.GLIGTCL	-----
Pcl	VIDGDV.SFD	GNTGTGLPLL	TDFEAHIWYF	.VQVDAGKGP	GLPFKRV
FoLnp11	VCEGAA.NLG	CNGGT.LGL.	.DIAAHLHYF	.QATDACNAG	GFSWRRYRSA
		338			
rhimi	-----	-----	-----	-----	...
rhidl	-----	-----	-----	-----	...
SP400	-----	-----	-----	-----	...
Pcl	-----	-----	-----	-----	...
FoLnp11	ESVDKRATMT	DAELEKKLNS	YVQMDKEYVK	NNQARS..	

Fig. 1

Alignment of lipase sequences